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NEW SPECIES OF DIPTERA.

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THE following new species have accumulated in connection with some faunistic work in course of preparation.

Chaoborus albatrus, sp. nov.

♂.—Head white; around the base of the antennae, the tips of the palpi and proboscis brown; the plumose antennae white, the joints narrowly annulated with black. Thorax white, with long whitish hairs, and three broad brown stripes, the dorsal stripe narrowly divided, the others not extending forward of the suture; two small brown spots in front of the suture and a row of spots on the pleurae, the latter forming an interrupted stripe below the base of the wings; scutellum white, metanotum dark brown. Abdomen white, translucent, with long white hairs; a small brown spot on the anterior angles of each segment; genital appendages yellow, tipped with brown. Halteres white. Legs white, the extreme base of the front femora, a subapical band on all of the femora, and the tips of all the tibiae and tarsal joints brown. Wings whitish-hyaline, with conspicuous brown spots at the tips of the first and second veins but less distinct at the tips of the other veins; distinct spots are also present at the base of the third vein, the cross-vein, and fork of the fifth vein. Length 5 mm.

One male and three females, *holotype* and *allotype*, Brookline, Massachusetts, June 18, and one *paratype*, Mt. Tom, Massachusetts, July 14, 1907 (C. W. J.), in the collection of the Boston Society of Natural History. One *paratype*, Brookline, Massachusetts, in the author's collection.

This resembles *C. punctipennis* Say, but that species has more numerous spots on the wings and the femora and tibiae are finely punctate with black.

Tabanus pemeticus, sp. nov.

♀.—Front brownish pollinose with short black and yellow hairs, frontal and ocelligerous tubercles wanting; cheeks and middle of the face whitish, with the sides yellowish pollinose; hairs on the cheeks long and white. The first and second joints of the antennae yellow with black hairs, third joint reddish brown, with prominent angle above; palpi white with black hairs; eyes pubescent. Thorax, scutellum, and abdomen blackish with golden-yellow tomentum and black hairs, pleura whitish pollinose and with long white hairs, sides of the first and second segments of the abdomen slightly yellow; venter grayish pollinose. Legs yellow with black hairs, coxae and base of the middle

and posterior femora black, the anterior coxae with long white hairs; tips of the front tibiae and tarsi brown, the tips of the middle and posterior tarsal joints annulated with brown. Wings hyaline; costal cell yellow, veins brown; anterior branch of the third vein with a prominent stub. Halteres yellow. Length 13 mm.

The male differs from the female in being grayish pollinose with long grayish hairs, with yellowish tomentum on the sides and posterior margins of the abdominal segments. The femora except the tips, the frontal and middle tibiae and tarsi black. Length 13 mm.

A third specimen (female) has the third antennal joint dark yellow, a very small black shining frontal callous, the branch of the third vein angulate but the stub wanting. Length 13 mm. The stub is also wanting in a general male, length 11 mm. A female from Newfoundland, measuring 11 mm., resembles the type except that the antennae are a dark orange yellow.

Five specimens: *holotype*, ♀, Southwest Harbor, Maine, August 20, 1920 (C. W. J.); *allotype*, ♂, Northeast Harbor, Maine, July 22, 1918 (Dr. C. S. Minot); *paratypes*, ♀, Mt. Cadillac (Green Mt.), Mt. Desert, Maine, August 17, 1920, and ♂, Southwest Harbor, Maine, July 15, 1918 (C. W. J.), in the collection of the Boston Society of Natural History. One ♀, Little River, Newfoundland, July 23, 1905 (Percy G. Bolster) in the author's collection.

The name is derived from Pemetic, the Indian name for Mt. Desert, where four of the specimens were collected. The species belongs to the group comprising *T. bicolor* Wied, *T. ohioensis*, and *T. thoracicus* Hine, and may prove to be only a large maritime form of the last. The larger size, the marked difference in the color of the pilosity of the dorsal and ventral surfaces, the dark-brown veins, and the prominent stub or angle to the branch of the third vein seem (with the material at hand) to separate it from that species.

Dipalta banksi, sp. nov.

D. serpentina Osten Sacken, West. Dipt., 1877, p. 237 (in part); Johnson, Bull. Amer. Mus. Nat. Hist., 1913, vol. 32, p. 57.

Front black, with yellow tomentum and black hairs, face brown, with black and yellow hairs; first and second joint of the antenna brown, third black, the third joint and style less attenuated than in *D. serpentina*. Thorax black covered with a dark-yellow tomentum, pile on the sides yellow and black, on the pleura light yellow. Abdomen black with yellow tomentum, pile on the sides of the first and second segments light yellow, pile on the posterior and remaining segments black. Legs brown with yellow tomentum and black spines. Halteres brown. The markings on the wings are dark brown and more diffused than in *D. serpentina*, but the chief difference is in the venation, the second longitudinal vein being less sinuous, as shown in Fig. 2. It is also smaller, 7 to 9 mm.

Holotype: Great Falls, Virginia, September 12; *paratypes*, Fall Church, Virginia, September 7, Great Falls, Virginia, July 8, all in the Banks Coll. (Mus. Comp. Zool.). St. Augustine, Florida, in the author's collection.

When preparing my List of Florida Diptera, I noticed that this fly differed from the typical form, but having only one specimen, I refrained from describing it. Through the kindness of Mr. Nathan



FIG. 1.—*Dipalta serpentina* O. S.

FIG. 2.—*Dipalta banksi* Johns.

Banks I am able to study some additional material from Virginia and find that the characters referred to by Osten Sacken are constant and readily separate it from the western species.

***Thinophilus bimaculatus*, sp. nov.**

♂.—Front, face, and occiput covered with a silvery-white pollen; palpi white, broad; antennae yellow, the third joint brownish on the outer margin. Thorax and pleura with a whitish pollen; two narrow abbreviated subdorsal lines and the scutellum brown. Abdomen with a whitish pollen. Legs yellow, the basal half of the femora and the outer half of the tarsi blackish, the tarsi slender and of even width. Halteres light yellow. Wings whitish-hyaline, veins brown with a distinct clouding at the posterior cross-vein, and on the fourth vein midway between the cross-vein and the tip; there is also a slight clouding at the junction of the third and fourth veins. Length 2.5 mm.

The female is similar except that the front and face are broader, the pollen of the vertex and the dorsum of the thorax are more yellowish, and the clouding on the wings is more diffused. Length 3 mm.

Six specimens collected on the white sand near the South Beach, Anastasia Island, St. Augustine, Florida, April 19 and 21, 1919. Types, in the author's collection.

This species resembles *T. neglectus* Wheeler from Cape May, New Jersey, but is readily separated by its narrow, not broadened tarsi, the more conspicuous cloudings on the wings, and much lighter color.

***Thinophilus prasinus*, sp. nov.**

♂.—Front, face, and occiput a light, dull green covered with a grayish pollen, the broad palpi white, the occiput bearing long white hairs; antennae yellow, the upper part of the third joint brown, the thickened basal portion of the aristae black, the remainder white. Thorax dull green, the dorsum brownish- and the pleura whitish-pollinose; six dorso-centrals. Abdomen blue-green dulled by a whitish-pruinose covering. Front coxae yellow, dark at the base; the others dark, covered with a white pollen. Legs yellow, tips of the

tarsi brown, pulvilli white. Halteres light yellow. Wings hyaline, veins brown. Length ♂, 3.5 mm.; ♀, 4 mm.

Twelve specimens: *holotype* and *allotype*, Chatham, Massachusetts, June 30, 1904, and four *paratypes*, Chatham and Edgartown, Massachusetts, June 29, 1910, in the collection of the Boston Society of Natural History. *Paratypes* from Chatham, Massachusetts, and St. Augustine, Florida, April 18, 1919, in the collection of the Museum of Comparative Zoölogy, the American Museum of Natural History, and the author's collection.

Some of the Florida specimens have the antennae, palpi, front coxae, and the tarsi slightly darker than those from Massachusetts.

***Psila longula*, sp. nov.**

Front, face, inferior orbits and antennae yellow; arista and mouth-parts brown; vertex and occiput black, shining; frontal and vertical bristles and hairs on the lower part of the occiput light yellow. Thorax black, with short yellow hairs; pleura, metanotum and scutellum shining black, the last with two apical bristles. Abdomen black with yellow hairs. Legs yellow, tips of the posterior femora brown. Halteres white. Wings hyaline, veins brown, the apex slightly brownish, with fainter tinge of brown near the posterior cross-vein. Length ♂, 5 mm.; ♀, 6 mm. In some specimens of the female the black encroaches upon the front.

Fifteen specimens: *holotype* and *allotype*, Chester, Massachusetts, August 6, and July 25 (*C. W. J.*) and the following *paratypes*: Northeast Harbor, July 16 (*Dr. C. S. Minot*), Bar Harbor, July 24, and Fort Kent, Maine, August 17; Mt. Washington, New Hampshire, 3000 ft., July 28; Norwich, July 7, and Dummerston, Vermont, July 14 (*C. W. J.*), in the collection of the Boston Society of Natural History. Other *paratypes* from the above localities are in the U. S. National Museum, Museum of Comparative Zoölogy, Academy of Natural Sciences, Philadelphia, and the author's collection.

This has probably been confused with *P. levis* Loew, but the dark veins and clouding on the wings and the dark tips to the posterior femora readily distinguish it from that species.

***Chyliza nubecula*, sp. nov.**

♀.—Face and inferior orbits white; the lower two-thirds of the front yellow; upper parts of the front, vertex and occiput black, subshining; antennae and arista brown. Thorax and abdomen black with piligerous punctures, the pile of the thorax black, and of the abdomen whitish; scutellum black, shining. Legs black; front coxae, the outer half of the tibia, and all the metatarsi, yellowish. Halteres and calyptrae white. Wings hyaline; veins, stigma, and the apex forward of the third vein brown. Length 4.5 mm.

Three specimens: *holotype*, Northeast Harbor, Maine, July 6, 1909 (*Dr. C. S. Minot*) in the collection of the Boston Society of Natural History. *Paratypes*: Edmonton, Alberta, July 12, 1916 (*F. S. Carr*) in the National Museum, Ottawa, Canada; and High River, Alberta, July 15, 1921, collected by Mr. Owen Bryant, in the author's collection.

This species resembles *C. leguminicola* Melander, from Oregon, but the entirely black scutellum, darker and the small apical clouding on the wings separate it from that species.

***Pseudotephritis vau* Say, var. *approximata* Banks.**

P. approximata Banks, Proc. Ent. Soc. Wash., 1914, vol. 14, p. 138, corrected to *approximata* in the index, p. 135.

P. metzi Johnson, Psyche, 1915, vol. 22, p. 49.

In the types of *P. approximata* and *P. metzi* the spots on the cross-veins are widely separated and the sub-basal clouding is interrupted at the fourth vein. I now have before me two other specimens. One from the Delaware Water Gap, Pennsylvania, collected by Mrs. Annie T. Slosson, has the spots on the cross-veins separated by only one-third the distance of that in the type of *metzi*; the second, from Brookline, Massachusetts, September, 1920, collected by C. E. White, Jr., has the spot on the cross-vein very narrowly separated and of a yellowish color as in the typical *P. vau*, and the sub-basal clouding is not interrupted at the fourth vein. The two specimens show very clearly that this is undoubtedly only a variation of Say's species.

***Pseudotephritis vau* Say, var. *conjuncta*, var. nov.**

Another striking variety of this species was collected by the writer on an old log near the Beaver Dam Pond, Bar Harbor, Maine, August 10, 1920. In this the pre-apical costal spot is connected with the spots in the posterior cross-vein, forming a quite regular band of even width, and widely separated from the marking on the anterior cross-vein. The clouding is not interrupted at the fourth vein. Length 6.5 mm.

Type, in the collection of the Boston Society of Natural History.

Seioptera dubiosa, sp. nov.

♀.—Head yellow, the orbits whitish; antennae and palpi yellow; length of the third joint about double its width; ocellar triangle black. The upper part of the occiput on the sides, brown. Thorax brownish black, shining, with two subdorsal pruinose stripes; humeri yellow. Abdomen black, shining; base and the long fifth segment yellowish; terminal segment whitish; ovipositor brown. Legs yellow, the last two joints of all the tarsi brown. Halteres and calyptrae white. Wings hyaline, the subcostal cell, base, and tip of the marginal, tip of the submarginal, and part of the tip of the posterior cell brown. Length 5 mm.

One specimen, *type*, Northeast Harbor, Maine, July 16, 1909 (*Dr. C. S. Minot*), in the collection of the Boston Society of Natural History.

Chaetopsis apicalis Johnson, var. *duplicata*, var. nov.

This species is common in the salt marshes from Florida to Machias, Maine. The typical form is found from New Jersey southward. In the marshes of Massachusetts, however, the species shows considerable variation and indications of a pre-apical band become more and more prominent as the species extends northward. In the marshes along the north shore of Mt. Desert and the marshes of the Machias River, below Machias, Maine, the pre-apical band becomes permanent, with little variation, while the typical form is absent. To this extreme form I am applying the above name.

The *holotype* and *allotype*, "Narrows," Mt. Desert, Maine, August 13, 1920, and four *paratypes* from the same place, June 9, 1921, and Machias, Maine, July 17, 1909, are in the collection of the Boston Society of Natural History; other *paratypes* are in the Museum of Comparative Zoölogy, U. S. National Museum, Academy of Natural Sciences, Philadelphia, and the author's collection.

In the typical *apicalis* the stigma is not colored, but in the *duplicata* it is slightly brownish, with sometimes a faint suggestion of a band, pointing to a possible relationship with *C. fulvifrons* Macq. in the north, and *C. debilis* Loew in the south. *C. aenea* Wied and *C. apicalis* Johns. are confined to the salt and brackish marshes and have not been found inland. The *C. aenea* of authors that is said to injure corn, sugar-cane, onions, etc., is the *C. fulvifrons* Macq. In my paper on the Diptera of Florida¹ the difference between the two species was pointed out, a view later endorsed by Mr. E. T. Cresson, Jr.² Say described two forms as *trifasciata*: the first is *C. aenea* and the second *C. fulvifrons* so that the name is not available. *C. massyla* Walker is a valid species with black legs and with broad, dark, continuous bands on the wings. It is locally common in fresh-water marshes. The species of *Chaetopsis* of the eastern United States would form an exceedingly interesting group for biological study, their abundance throughout the entire summer and the ease with which one species (and no doubt the others) can be raised, would aid greatly in the work.

The marked variations in the maritime species at the more extreme limits of their range, or the inland species when breeding in the salt or brackish marshes, are not uncommon. The specimens of *Chrysops fuliginosus* Wied (*C. plangens* Wied), from Florida and Georgia are quite different from those of the Maine coast. From the latter place

¹ Bull. Amer. Mus. Nat. Hist., March 1913, vol. 24, p. 83.

² Ent. News, July 1913, vol. 24, p. 317.

the males and females are similar, for the distinct grayish markings on the abdomen and the subhyaline of the wings in the southern specimens of the female become obsolete in the more northern specimens. The common green-head, *Tabanus nigrovitta* Macq., of the Atlantic coast from Maine to Florida varies greatly in size in different localities. When attaining a length of 12 to 14 mm. it is the *T. conterminus* Walker. *Tabanus atratus* when breeding in the saline marshes, assumes a form known as *nantuckensis* Hine.

Since the following generic names are being used, it might be well to call attention to the fact that they are both preoccupied.

Pandora Haliday, 1833, was used by Hendel (Wiener Ent. Zeit., 1910) and adopted by Melander (Wash. Agric. Exp. Sta., Bull. 143, 1917) in place of *Saltella* Robineau-Desvoidy, 1830, although the latter has been used prior to 1910 without question. It is preoccupied in Mollusca by *Pandora* Bruguière, 1792.

Melina Robineau-Desvoidy, 1830 (Myodaires, p. 695) is used by both Cresson (Trans. Amer. Ent. Soc., 1920, vol. 46, p. 41) and Melander (Ann. Ent. Soc. Amer., 1920, vol. 13, p. 313) for the *Sciomyza* of authors, not Fallen. A second name by Robineau-Desvoidy, *Pherbellia* (Myodaires, 1830, p. 695) will have to be substituted as *Melina* was used in Mollusca by Retzius in 1788.